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ABSTRACT

Equity in the institutional choices of enrolling college students was assessed. The focus of study was whether students similar in educationally relevant characteristics, but dissimilar in ascriptive or socioeconomic background characteristics, attend similar institutions at similar rates. The study was based on multiple regression analysis of comprehensive student survey and college attendance data. A random sample of 5,211 students from a nationally representative sample of 1975 college freshmen was studied. The results suggest that aside from the predictable role of the educationally relevant factors (ability, achievement, involvement, and aspirations) a significant limiting role in the nature of institutional choice is played by socioeconomic background factors. Specifically, lower parental education, lower parental income, and greater family size all tended to limit the student body quality (selectivity), opportunity structure (prestige), resource availability, and cost of the institutions chosen by the 1975 student sample. The net influences of the ascriptive factors of race, ethnicity, and sex were more mixed. The results suggest that the inequity in the college choice process, from a meritocratic perspective, lies largely in class-related factors rather than in ascriptive factors. Lower parental social and economic resources appear to limit significantly the nature of the college experiences of offspring. A bibliography is appended. (SW)

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RECONCEPTUALIZING EQUITY IN
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ABSTRACT

Because they concentrate on generalized group differences in enrollment patterns without simultaneously taking into account all of the educationally relevant individual, group, and institutional characteristics and differences, traditional conceptualizations and evaluations of equity in postsecondary participation patterns may underestimate the complexities of the choice process among students. Arguably more appropriate research evidence on participation equity in the college choice process is presented here. The results for a national sample of 1975 college freshmen suggest that educationally relevant factors have greater power in explaining the nature of college choices than ascriptive or socio-economic background factors, but the latter factors still play a significant role, net of educational factors. Specifically, it appears that both the academically and socio-economically "rich" become richer (i.e., attend schools having superior intellectual and material resources and superior opportunity structures) while the academically and socio-economically "poor" become poorer. The net influences of the ascriptive factors of race, ethnicity, and sex are more mixed. The implications of these findings for future policy are discussed.

RECONCEPTUALIZING EQUITY IN POSTSECONDARY PARTICIPATION PATTERNS

Differences between participation rates of various groups form the basis of numerous postsecondary policy analyses (e.g., see H.E.W., 1977, 1978).¹ In relying upon these data, analysts accept a conceptualization of equity in postsecondary participation patterns that is problematic on two significant grounds. First, inequity is assumed to be denoted by lower proportions from disadvantaged groups exhibiting certain favored educational patterns. Consider this statement: "[T]he central issue is whether women and minority males achieve the same levels of educational attainment as majority males and, if not, whether the gap . . . has increased or decreased." (Commission on Civil Rights, 1978, page 9). This is a significant statement about postsecondary equity and policy for those groups only if there are evident barriers to attendance by those groups qua groups. A failure to consider the participation decision as a product of a host of intercorrelated cultural, social, economic, and educational factors working simultaneously can lead us to attribute to one group characteristic (e.g., race) a problem based in another (e.g., class) or in a combination of various group and individual characteristics.²

Second, the postsecondary system has been assumed to be monolithic or, at best, a collection of types of institutions exhibiting educationally meaningful inter-type differences but only minor intra-type differences. Consider this statement: "[M]inorities increased their participation in higher education during the 1970s, but differences continued in the type of institutions attended by these groups. While the largest proportion [of all college students] . . . attended public 2-year institutions in fall 1978, the proportion was lower for whites than for other racial/ethnic groups." (National Center for Education Statistics, 1980, page 97). Two-year institutions are

not by definition educationally inferior to four-year institutions, so this is not necessarily a statement about equity. In an era of increasing heterogeneity in attendance patterns, analysts may need to pay more attention to educationally-based differences among institutions and less attention to decreasingly meaningful typological differences.

The major problem with focusing on group participation rates is that these kinds of indicators have limited true policy significance. It does not follow from an unqualified finding of lower participation by certain groups that further increases in funding of financially-oriented programs of the kind presently in favor (e.g., the Pell Grants program) are the optimal way to conduct the multi-billion dollar attack by institutions, states, and the federal government on inequities in higher education opportunity. Clearly, student aid plays a necessary role in assuring equity for substantial numbers of students, and decreases in existing aid programs are highly problematic from an equity perspective, but the continuing growth of these programs has been largely based in the belief of both public³ and private⁴ policymakers that providing increasingly large amounts of aid and subsidy money to lower income students will increasingly promote their distribution into various higher educational opportunities on the basis of educational factors rather than other factors. The persistence of attainment deficits in the face of these programs has led to serious reconsideration of that belief.⁵ Further increases in aid funding may provide only limited enrollment effects at high costs to governments, but what policy moves would be effective and efficient from a cost/benefit perspective? It is the thesis of the present paper that without greater information about the specific nature of the existing matches

between students and institutions, designing and evaluating policies to stimulate participation beyond present levels become too heavily imbued with guesswork about causality.

The present paper concentrates on increasing policy-relevant knowledge about the college-bound student's choice of which college to attend, since other analysts have already profitably pursued similar lines of argument in examining the college attendance vs. non-attendance decision. The most notable of those "access" studies, which by definition need to take into consideration only the first of the two arguments stressed above, have suggested that, net of ability-related factors, the relationships among socioeconomic background, secondary-school curricula, and the motivation/attitude complex are the keys to the lower postsecondary attainment patterns of disadvantaged groups, not financial barriers or racially or sexually discriminatory educational practices per se. For example, Thomas et al. (1979) and Peng et al. (1977) report that, although blacks may have lower college participation rates than whites, they are nevertheless more likely to attend college than whites when the confounding influences of tested ability, socioeconomic status, and other background characteristics are controlled, and Jackson (1977), Jackson and Weathersby (1975), Rosenfeld (1980), and Corazzini et al., (1972) report that financial aid and tuition levels apparently have only very limited effects on students' basic enrollment/non-enrollment decisions, despite the lower enrollment rates of lower-income students.

It might be argued that addressing the college choice issue holds little potential for equally significant conclusions, since the choice issue is

relevant to policy concerns only to the extent that the educational experiences, degree, and prestige provided by one's institution affect one's later educational and occupational opportunity and attainment, and some research on this subject has suggested that the effects of specific college characteristics on eventual success are trivial or non-existent (see Alwin, 1974; Trusheim and Crouse, 1980). But there is also a substantial research literature suggestive of such effects in highly specified models (see Tinto, 1980; Weisbrod and Karpoff, 1968; Astin, 1968; Anderson, 1981; Solmon, 1975; Bean, 1980; Terenzini and Pascarella, 1980; Wachtel, 1975; Wise, 1975). Regardless of one's reading of that evidence, if one accepts the notion that people's educational and occupational careers consist of a sequence of moves through a series of positions, each offering a given probability of further educational and/or occupational advancement within a given time frame, then evidence that students from disadvantaged groups are making educational choices that are less articulated with future advancement opportunities than the choices of others (e.g., lower resource, non-prestigious institutions) may be taken as evidence that the college choice process is a broadly significant area for equity research.

In addition, the college choice issue may be viewed as important in and of itself, independent of its instrumental relevance to future advancement: with Americans of all backgrounds and ages spending increasing proportions of their lives in some kind of educational institution, often for reasons having little to do with career success, optimizing the quality of the experiences encountered in these institutions by various advantaged and disadvantaged

groups may be defended as a legitimate equity-policy goal not linked to equality of career opportunity.

The present paper therefore proposes and empirically utilizes a new way of assessing equity in the analysis of the institutional choices of enrolling college students. The central argument is that, in examining college choice, analysts need to consider simultaneously: a) a wider range of student characteristics, including the educationally-relevant characteristics such as aspirations, achievement and academic ability, as well as the various ascriptive and socio-economic background characteristics such as race, sex, number of siblings also making claims on parental time and money, and socio-economic status, and b) more specific institutional characteristics, including the academic quality of the student body, the internal (educational) and external (post-graduate) opportunity structure, the quality of faculty and facilities, and the costs of attendance. The guiding conception of equity, outlined in Figure 1, is based on a notion of meritocracy in which only educationally-related student characteristics should have any influence on the nature and quality of one's undergraduate experiences. Any influence on institutional choices from ascriptive factors or from socio-economic background factors, net of the relationship of these factors to educational characteristics, is considered illegitimate under this definition of meritocratic equity. The critical empirical question is thus whether students similar in educationally-relevant characteristics, but dissimilar in ascriptive or socio-economic background characteristics, are attending similar institutions at similar rates.

Background Literature

Students' college choices have been examined in the past from three major perspectives: the financing approach, the self-report approach, and the distributional approach. The first approach has been to focus almost exclusively on the role of financing (i.e., subsidies and financial aid) in assuring a reasonable degree of choice for disadvantaged students. The findings of studies by Leslie and Fife (1974), Fife (1975), Boyd and Fenske (1975), Carroll et al. (1977), Jackson (1977), Astin (1978), Dresch and Waldenberg (1978), and Tierney (1979) suggest subsidies and aid can play a minor but significant role in the decisions needy students make in the face of acceptances at more than one institution. Other finance-oriented choice studies have assessed whether students, regardless of parental income, face equivalent "net prices" (educational expenses minus grant aid minus parental contribution) at their preferred institutions. These studies have found essential net price equivalence up to parental incomes of about \$20,000, suggesting to the authors that matriculation decisions are no longer primarily financially based, due to the massive growth of aid programs in the past few decades (see Haines, 1979; Corallo and Davis, 1977; HEW, 1978).

While these studies are valuable, they employ a very limited range of institutional and student variables. Furthermore, as Goggin (1979) has pointed out, they assess only a small segment of the overall decision process, that part taken up by the decision "at the margin" between schools that have accepted the student's application. They thereby ignore both the beginning of the choice process (how the initial choice set was established)⁶ and part

of the middle (how non-financial factors relating to both institutions and students are weighed in making a choice).

Researchers using the second approach attempt to ascertain the critical factors in enrollment decisions directly from surveys of students. These self-report studies tend to suggest that the effects of financial factors on enrollment choices are limited. The national data presented by Astin, King, and Richardson (1978) show "academic reputation" to be by far the factor most frequently named by freshmen as being very important in the final matriculation decision, followed by "offers special educational programs." Older evidence presented by Richards and Holland (1965); Tillery, Donovan, and Sherman (1966); Bowers and Pugh (1975); and Gilmour, Spiro, and Dolich (1978) suggests this pattern has not changed much over time. Trent (1970), in his review of this survey literature up to 1970, concluded that the decision as to the college in which to enroll is founded in the same personal rationales as the decision of whether to enroll in college, and each involves a complex web of socio-economic, motivational, educational, and environmental factors. Unfortunately, self-report research has thus far not tended to tie students' reports to the objective parameters of their decisions. As with the first approach, the various objective characteristics of students and the institutions they choose have not been comprehensively linked.

The third approach has indeed addressed this issue by focusing on the empirical relationships between socio-economic status, sex, race, and the types of colleges attended. The central question has been: how are the distributions of students and institutions matched? Astin et al (1976) report that women in the early 1970's tended to be "concentrated in smaller, less

selective, and less affluent institutions" (p. 30). Henderson and Plummer (1978) report black college students gradually decreasing their attendance at traditionally black institutions, where over two-thirds were enrolled in 1953. Rossi and Coleman (1964), Tillery, Donovan, and Sherman (1966), and Baird (1967) found lower-SES students prior to the 1970's appreciably less likely to attend four-year colleges, universities, and private institutions. This finding was replicated in a wide range of studies of 1972 high school graduates. Although middle-class students were found to be utilizing the community college systems in growing numbers at that time (Peng et al., 1977), the historic pattern still held in 1975: parental income was strongly correlated with going to private, four-year, and out-of-state institutions (Astin, 1978).

Relationships between attendance patterns and indexes of student disadvantage are better understood in the context of controls for students' educational characteristics, so the distributional approach has in some instances taken multivariate rather than bivariate form. Sewell and his colleagues (see Sewell, 1971) examined 9000 Wisconsin high school graduates of 1957 and found that, holding ability constant, lower-SES students and women students were much less likely to be enrolled in selective four-year colleges and universities than other students, a finding replicated for lower-SES students in later analyses of the high school class of 1972 reviewed by Peng et al. (1977) and in a more recent, but less nationally representative, study by Munday (1976). Bailey and Collins (1977) found evidence for the class of 1972 that among four-year college students, whites were more likely than blacks to attend highly selective institutions and blacks were more likely to attend

low-selectivity institutions, but when academic ability was controlled, blacks tended to be more likely to attend both high-selectivity and low-selectivity institutions.

The most recent and most comprehensive examination of choice processes from the multivariate distributional perspective is that by Astin (1978). He found that after ability and achievement, the most powerful predictor of the selectivity, cost, and distance from home of the institution attended is parental income. Being female, being white, having lower ability, and coming from a lower-income background all related to attending a community college. Echoing the earlier findings, males tended to be especially likely to attend higher cost, more selective institutions, after student ability and achievement were controlled.

Of the three dominant approaches described above, the third, in its multivariate form, most closely approximates that appropriate for the purposes of the present research. These studies are not bound to one kind of institution or one phase of the choice process, are behaviorally rather than attitudinally based, and are inclusive of various non-economic variables. But even this research has not adequately responded to the comprehensiveness of the demands of our conceptualization. On the student side of the equation, socio-economic status is sometimes indicated only by parental income, race is frequently not considered, family size and its social and financial implications are usually ignored, data gathered well before the boom in financial aid funding are often used, and certain student educational characteristics relevant to the choice process are not considered. Having a wider range of variables relating to

achievement, high school experiences, ability, and aspirations seems a particularly critical need, given the recent evidence downplaying the role of purely financial factors in college attendance patterns (see Peng et al., 1977; Jencks et al., 1979; Thomas et al., 1979; Congressional Budget Office, 1980). In addition, the myriad differences in higher education institutions (e.g., see Astin and Lee, 1972) are often indicated in these studies by only a constrained set of types: two-year vs. four-year, public vs. private, and so forth. As Mundel (1974) has noted, "The attributes of a college, not its type or control, are what is of interest to potential students (p. 51)."

Research Design

Method: The study is based on multiple regression analysis of comprehensive student survey and college attendance data. Independent variables are indicated by data for educationally relevant student characteristics such as measured ability, aspirations and achievement, and for student ascribed and socio-economic characteristics. Dependent variables are indicated by data on the specific nature of the educational experience received at one's postsecondary institution. Figure 1 suggests the format of the regression analysis.

Data: The present study employed a random sample of 5211 students (2617 men and 2594 women) drawn from "the SISFAP-A 11th-12th Grade Freshman Longitudinal File." This data-set consists of data for a nationally representative group of over 115,000 1975 college freshmen who had a) taken the Preliminary Scholastic Aptitude Test (PSAT) as high school juniors in 1973-74, b) taken the American College Testing Program Assessment (ACT) or the Scholastic Aptitude Test (SAT) as high school seniors in 1974-75, and c) completed the

Cooperative Institutional Research Program (CIRP) survey instrument as college freshmen in the fall of 1975. Individual student case data from these three sources were matched in 1976-77 by Alexander Astin and his associates at the Higher Education Research Institute. Their methods of data gathering, the SISFAP-A data set itself, and the results of their subsequent study of college choice processes are described in detail in Astin (1978).

SISFAP-A is the most recent nationally representative data base to include extensive data on student ability, student characteristics other than ability, and institutional characteristics other than type and control.⁷ It may have some minor sample bias toward more knowledgeable, better prepared students (due to the requirement that students in the sample be PSAT-takers), its sampling of minority and community college students is not as representative as would be ideal, and results from it are not generalizable to the increasing number of students entering college as adults with full-time work and family experience behind them (National Center for Education Statistics, 1980). Nevertheless, these college choice data are a unique resource because of their comprehensive, longitudinal nature.

Variables and Their Indicators: Each of the indicators of student characteristics in the study is directly taken from SISFAP-A data tapes, but each originally was included in SISFAP-A from either the 1975-76 freshman-year CIRP survey or the standardized test taken by the students in 1974-75, their senior year of high school. From the CIRP survey came student reports of race and ethnicity, sex, parents' education levels, parental income, educational aspirations, and high school academic achievement. From the standardized tests came students' reports of the number of siblings dependent on their

parents (an indicator of the availability of the parental resources of time and money), participation in high school journalism, debate or drama, and participation in school departmental or pre-professional clubs. Also from the standardized tests came students' combined test scores, as an indicator of tested ability. If the student took the ACT Assessment but not the SAT, the ACT scores were converted into SAT scores through a conversion formula agreed upon by the two testing agencies (for details see Astin, 1978).

Each of the institutional indicators is also taken directly from the SISFAP-A data tapes. Selectivity, the indicator of student-body academic talent, is based in the average SAT scores of the student body, divided by 10. Educational and general expenditures, the indicator of faculty and educational facilities quality, are calculated per undergraduate student and transformed into an ordinal scale. Tuition and fees per student, the indicator of student costs, are divided by ten. The indicator for the internal and external opportunity structure is based in both total enrollment and selectivity, the argument being that the institutions providing the greatest opportunities for students are those that are both academically strong and heterogeneous and also highly visible to the outside power structure. Those institutional characteristics are abbreviated here as "prestige," and are assumed to be joint functions of the level of enrollment and the level of selectivity. By such standards Columbia, Pennsylvania, Berkeley, and Wisconsin may present better opportunity structures (i.e., may have higher prestige, as it is defined here) than Amherst or Williams, even though the latter may be equally or more selective. The original statement of the rationale for this indicator is presented in Astin and Lee (1971, Chapter 1). Its coding details are

presented in Astin (1978, Appendix E, Note A, page 32) and reproduced in Table 1 here. It should be noted that Astin defends this indicator's utility mainly on the basis of external factors, whereas the present paper adopts also an internal educational view of its significance. The specifics of the coding of each of the other institutional and student variable indicators are presented at the bottom of Table 2.

INSERT TABLES 1 AND 2 ABOUT HERE

Results

Table 2 presents the means, standard deviations, and correlations for the focal variable indicators. Comparison of the sample means with those for the 1975 freshman class as a whole (Astin et al, 1975) suggest that the SISFAP-A sample has slightly higher proportions of higher income, white, and higher achieving students. This was expected for two reasons: the use here of unweighted data, and the requirement here that students have taken the PSAT in the 11th grade. The differences are not considered large enough to affect the multivariate results in any significant way.

Table 3 presents the regressions for institutional characteristics, which suggest that ascribed and socio-economic background characteristics do indeed play a significant role in the selectivity of students' institutional choices, independent of the relationships of those characteristics to meritocratically relevant factors such as ability, achievement, and aspirations, which influence choices in predictably powerful ways. Black and female students, students whose parents had lower incomes and lower educational attainments, and students who had larger numbers of brothers and sisters all were less likely to go to

highly selective institutions, even when other educationally relevant characteristics were controlled.

INSERT TABLE 3 ABOUT HERE

Table 3 also reveals that these same students, with the exception of blacks, were significantly less likely to enroll in the more prestigious institutions that may have superior internal opportunity structures and also play an especially positive role in educational and occupational attainment processes after graduation. Interestingly, Hispanic-background students were significantly more likely to enroll in high prestige institutions, perhaps partially because of the proximity of several such institutions to large concentrations of Hispanic students in California.

Table 3 also presents results relating to the quality of the educational faculty and facilities encountered by students from various backgrounds, as indicated by the educational and general expenditures at the institutions they choose. Even in the context of controls for ability and other educational background factors, students from lower socio-economic backgrounds, as suggested by the level of mother's education and the level of parental income, were less likely to attend schools spending liberally on undergraduate education, as were students having larger numbers of dependent brothers and sisters. Hispanic students and black students, though, were more likely than others to attend these schools. A similar pattern emerges in the findings on the costs of institutions attended by students from various backgrounds. In the context of the various controls, black, Hispanic and female students were especially likely to attend higher cost institutions, but their family situation

apparently directly or indirectly blocked the attendance choices of many disadvantaged students. In sum, the results for expenditures and for costs suggest strongly that the ascriptive characteristics of race, ethnicity and sex do not prevent disadvantaged students from attending the higher-resource, higher-cost institutions, but the social and economic characteristics of one's family do indeed do so.

For each of the four outcomes in Table 3, the percent of the total variance explained that is explained by educational factors alone indicates that non-educational influences do not dominate students' college choices. In a series of regressions in which they were the sole independent variables in the equation,⁸ educational characteristics accounted for 67% to 91% of the explanatory power of the model, suggesting meritocratic factors substantially outweigh other factors in choice patterns. The unique role of ascriptive and socio-economic factors is not trivial, however, and any role of such factors is of policy and theoretical concern if one accepts college choices as an important factor in students' subsequent lives.

Conclusions

The results of this study of students' 1975 institutional choices parallel in two ways those previously reported in studies of the college attendance/non-attendance decision (Thomas et al., 1979; Peng et al., 1977). First, net of the predictable role of the educationally relevant factors of ability, achievement, involvement, and aspirations, a significant limiting role in the nature of postsecondary institutional choices is played by factors relating to socio-economic background. Specifically, lower parental education, lower

parental income, and greater family size (i.e., greater competing claims on parental time and money) all tended to limit the student body quality (selectivity), opportunity structure (prestige), resource availability, and cost of the institutions chosen by our 1975 student sample. Second, ascriptive factors (race, ethnicity, and sex) played a less significant role in students' choices than that played by socio-economic factors, and that role was more often positive than negative in its relationship to institutional quality indicators. As of our 1975 sample, in the context of controls for socio-economic and educational characteristics, blacks, Hispanics and women attended higher-cost institutions than others, blacks and Hispanics attended higher-spending institutions than others, and Hispanics attended higher-prestige institutions than others. Also in that context, however, women attended lower-selectivity and lower-prestige institutions, and blacks attended lower-selectivity institutions. These results suggest that the inequity in the college choice process, from a meritocratic perspective, lies largely in class-related factors rather than in ascriptive factors. Lower parental social and economic resources appear to limit significantly the nature of the college experiences of offspring.

It should be noted that the meritocratic conception of equity used here is not the only one policy analysts might choose (see Husen, 1975; Berne and Stiefel, 1979; Miller, 1975; Hechinger, 1975; Norris, 1975). In fact, it is perhaps the most forgiving of resource differences in the institutions encountered by members of different disadvantaged groups. From a more egalitarian perspective, why should the academically least accomplished college students receive lower levels of educational expenditures than more talented students?

An argument may be made that they should receive equal resources and experiences, compared to others (i.e., in statistical terms, the R^2 's in Table 3 should all be close to zero). That argument gains additional force when one considers the fact that blacks, Hispanics, and socio-economically disadvantaged students are disproportionately represented in the ranks of those low in tested ability (see Jencks et al., 1979). Indeed, this fact suggests an argument for "redemptive egalitarianism" might also be made: academically lagging students should receive superior resources and experiences, compared to others. Under these alternative standards of equity, the matching of students and institutions in the U.S., as evidenced in the present research, performs even more poorly than under the definition operative here. The present results suggest very strongly that, in the high-school-to-college transition, the academically and socio-economically "rich" become richer (i.e., attend schools having superior intellectual and material resources and superior opportunity structures, while the academically and socio-economically "poor" become poorer.

If one accepts the longer-range importance of the college choice issue for future educational and occupational attainment, these results must be considered significant for federal and state policy. Attention to the issue by policymakers is perhaps made more likely by the demographic forecasts: as the number of high school graduates declines in the 1980's, and competition among institutions for students steps up in the face of severe threats to survival (Breneman and Finn, 1978; Mortimer and Tierney, 1979; Sloan, 1980), governments may gradually shift their focus from assuring access (equal opportunity to enter postsecondary education may become a smaller problem as

institutions determinedly hunt for students) to assuring informed, equitable choices. Already, some analysts are emphasizing the need for increased attention to policy and research in this area (Pesqueria 1975; Peng et al, 1977; Bailey, 1977). But what does the discovery here of a possible problem imply in concrete policy terms?

Consider the finding here that talented blacks, relative to other similarly endowed students, seem to systematically "underenroll" in highly selective institutions. Under our definitions, they tend as a group to have less talented college peers with which to interact and grow. Perhaps these students make a conscious choice to avoid selective institutions in favor of less selective institutions perceived as more receptive and attentive to minority educational needs, concerns, and development. Many predominantly black institutions might benefit from such a perception and choice pattern. Is taking no action the proper policy solution, since students and institutions choose each other in mysterious but presumably legal and arguably fair ways? Or is it greater funding of students' choices through aid programs, greater funding of highly selective institutions (with particular attention to minority retention and recruitment programs on those campuses), greater funding of the institutions black students do choose to attend (e.g., Title III's "Developing Institutions") in order to improve their student recruitment, retention, and educational programs, greater funding for Title I's secondary school district counseling programs, or some other tactic?

Some responses might be eliminated easily. For example, it is doubtful that, in the context of widespread affirmative action efforts, talented black students are systematically discriminated against in selective admissions

policies, or are receiving aid offers from highly selective institutions that are inferior to those they receive elsewhere. Also, evidence from elsewhere suggests that policies to increase black's educational aspirations would do little, since their aspirations are already generally equal to or higher than those of others (e.g., see Coleman, 1966). Finally, the enrollment responsiveness to increasing financial aid levels further may be low compared to the costs (Thomas et al, 1979; Jackson, 1977; Congressional Budget Office, 1980). But to make any of the other choices entails making certain interrelated assumptions about the proper focus of government equal opportunity efforts (students vs. institutions), the most critical definition of educational quality, the proper definition of postsecondary choice equity, and the efficacy of particular kinds of policies for changing the nation's postsecondary system. The complexities of this one issue provide a clear example of the unavoidable intricacy of the national debate on educational equity.

The central philosophical question raised by the present study is a political one: at what point should morally and legally acceptable behaviors of individuals and organizations become subject to governmental intervention in the interest of societal equity? The most striking finding of the present study is that, despite solid evidence from elsewhere that neither discriminatory admissions policies, financial considerations, nor any other legal, social, or economic factor poses a discernible and critical barrier to socio-economically disadvantaged students' enrollment in the general types of institutions they favor (Jackson, 1977; Astin, 1978; Leslie, 1977; Congressional Budget Office, 1980; Corallo and Davis, 1977), those students still tended to enroll in 1975 in institutions that were in some ways inferior to

those chosen by other students, and possibly a detriment to their future attainments. Are we to regard such a situation as grounds for serious policy action, or as merely unfortunate? No amount of research can provide an answer to what is essentially a question of values.

Some research steps are nevertheless clearly warranted on the basis of the present results. The fact that critical barriers are not yet discernible does not imply that such barriers do not exist. The most apparent explanation for the above participation pattern is that the basic themes and parameters of students' institutional choices are set down far in advance of actual applications, acceptances, aid offers, and enrollment. It is before the 12th grade that enduring preferences for certain institutions and kinds of institutions are determined (Jackson, 1977; Astin, 1978; Hearn, 1980; Rosenfeld, 1980; Rosenfeld and Hearn, 1981) and it is there where future choice research might best focus. Particular attention might be paid to levels of knowledgeability about institutions, costs, aid, and self at these early stages. Numerous analysts have found that about half of all students apply to only one institution (Jackson, 1977; Astin, 1978; Rosenfeld, 1980), and disadvantaged students are slightly more likely than others to limit their applications to only one institution (Rosenfeld and Hearn, unpublished analysis; Astin, 1978). Coleman et al (1966) report that black high school students have higher college aspirations than whites but less frequently read college catalogues, communicate with colleges, and take other concrete steps to act on their aspirations. It may be that out of the complex web of interrelationships between secondary school characteristics, class, status, and finances there emerges a tendency among the disadvantaged to limit institutional search and

application behavior. If so, whether this pattern is due to what Simon (1979) would term a lower "satisficing" level (i.e., more constrained institutional information search) among those populations, to a perception of barriers to opportunity in certain institutional segments, to a contextual deficit (lower access to educational information sources and models, whether they be based in peer networks, academic structures or family settings), or to some combination of these factors is a significant researchable question.

Further research might also attempt more detailed analysis of institutional quality. It should go without saying that the institutional characteristics considered in the current study are neither optimally informative nor exhaustive. They certainly indicate the actual experiences of individual students more accurately than institutional type or control, but they are by no means definitive. For example, institutions vary in the educational efficacy of their spending on educational and general matters, so higher levels of spending do not always imply higher levels of learning. Also, the similarity in the results for selectivity and prestige suggest this distinction, as defined here, is not very useful for understanding students' college choices. Perhaps the institutional indicators used in the present study could well be supplemented by attention to simultaneous, nationally representative sampling of students' perceptions of their postsecondary educational experiences.

There is also a need to conduct research like that reported here on more recent samples of students. The Middle-Income Student Assistance Act of 1979 (MISAA) and the additional student-aid changes currently being proposed by the Reagan administration might have some effects on the patterns reported here for students in 1975. In terms of attainment investigations,

the present research joins that of Thomas et al (1979) and Tinto (1980) in suggesting that such issues as interaction effects in the specific college choices of particular groups (e.g., race by sex interactions) and interactions between personal and institutional characteristics (both objective and perceptual) in eventual educational and occupational attainments might profitably be addressed in the future.

FOOTNOTES

- 1 For ease of reading, the terms "college," "postsecondary," and "higher" education are used interchangeably in this paper.
- 2 This point is not original. A similar, especially forceful argument is made in Goggin (1979).
- 3 For example, see HEW (1977, 1978).
- 4 For example, see Sloan Commission (1980), Orwig (1971), Carnegie Commission (1973), Committee for Economic Development (1973), Doermann (1978).
- 5 See Congressional Budget Office (1980), Davis and Van Dusen (1978), Jackson (1977), Peng et al. (1977), Levin (1978, 1979), and Thomas et al. (1979).
- 6 Rossi and Coleman's (1964) study for the College Board found the pre-high school years critical to the broad characteristics of one's choice set. In addition, according to Jackson's (1977) analysis of the 1972 NLS data and Astin's (1978) nationally representative research, from 40 to 60 percent of the high school seniors who apply to college apply to only one institution. This group's choices are not considered at all in the financing approach to choice.
- 7 The most similar data bases are: a) the 1980 High School and Beyond data, soon to be released to the public, b) the 1978-79 data base recently prepared by Applied Management Sciences, Inc., for the Department of Education's major study of financial aid practices nationwide, and c) the yearly Cooperative Institutional Research Program survey conducted by the Higher Education Research Institute and the American Council on Education. Data base a) will contain an inadequate range of institutional characteristics for the present study. Data base b) does not include any indicators of students' tested ability or post-educational involvements and has a limited range of non-financial institutional indicators. Data base c) is recent and contains a wealth of indicators of relevant student characteristics (the 1975-76 version of the CIRP questionnaire was an element of the matching process that created the SISFAP-A data base), but contains no indicators of students' tested ability and an inadequate set of institutional indicators. For the task at hand, the SISFAP-A data base is the optimal choice.
- 8 The specific coefficients for these regressions are not reported here but are available upon request from the author.

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Student Characteristics

Institutional Characteristics

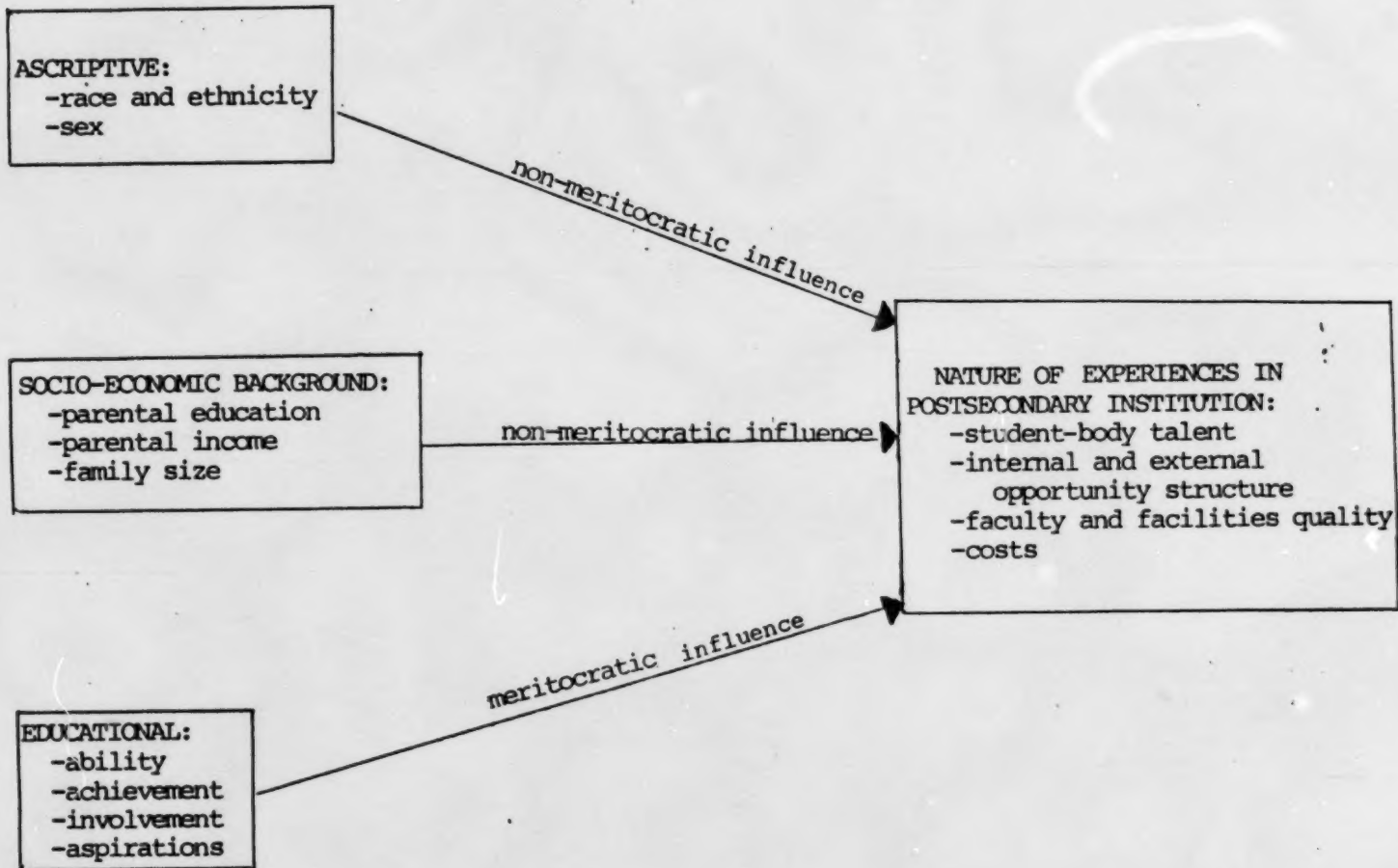


Figure 1

A Conception of Equity in the College Choice Process

Table 1
Coding of Institutional Prestige^a

		Total Enrollment								
		less than 250	250 to 499	500 to 999	1000 to 1499	1500 to 1999	2000 to 4999	5000 to 9999	10000 to 19999	20000 or more
Average Combined SAT Score ^b	1300 or more	5	7	7	8	8	8	9	9	9
	1225 to 1299	4	5	6	7	7	7	7	8	8
	1150 to 1224	3	4	5	5	5	5	6	6	7
	1075 to 1149	2	3	4	4	4	4	5	5	6
	1000 to 1074	2	2	3	4	4	4	4	4	5
	925 to 999	1	1	2	3	3	3	3	3	4
	850 to 924	1	1	1	2	2	2	2	2	3
	775 to 849	1	1	1	1	1	1	2	2	3
	less than 775	1	1	1	1	1	1	2	2	3

^aDerived from Astin (1978), Note A, page 32.

^bACT scores were converted into SAT scores as necessary for the purposes of this coding.

Table 2
Means, Standard Deviations, and Correlations for the Focal Indicators ^{a,b}

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Mean	Standard Deviation
1. Black	----																	.06	.25
2. Hispanic	-.03	----																.01	.11
3. Female	.08	-.02	----															.50	.50
4. Father's Education	-.20	-.05	.00	----														4.98	2.11
5. Mother's Education	-.09	-.06	.04	.54	----													4.38	1.76
6. Parental Income	-.19	-.04	-.03	.46	.33	----												23365	14728
7. Dependent Siblings	.02	.04	.02	.08	.02	.01	----											2.61	1.66
8. Tested Ability	-.33	-.05	-.22	.26	.20	.16	.02	----										10.15	1.97
9. Academic Achievement	-.15	.00	.10	.09	.07	-.01	.05	.52	----									5.94	1.50
10. H.S. Student Govt.	.00	.00	.05	.05	.05	.01	.14	.07	.16	----								.30	.46
11. H.S. Departmental or Pre-professional Club	.02	-.02	.11	-.04	-.02	-.06	.09	.00	.11	.11	----							.19	.39
12. H.S. Journalism, Drama, Debate	-.02	-.02	.11	.05	.06	-.01	.15	.11	.16	.30	.15	----						.36	.48
13. Educ. Aspirations	.06	.05	-.16	.13	.12	.09	.03	.28	.22	.10	.03	.10	----					3.91	.89
14. Institutional Selectivity	-.27	-.01	-.13	.28	.22	.25	-.01	.55	.35	.08	-.04	.09	.27	----				103.63	13.52
15. Institutional Prestige	-.18	.01	-.13	.25	.20	.22	-.01	.51	.34	.07	-.03	.08	.27	.92	----			4.01	1.79
16. Institutional Per-Student E&G Expenditures	.04	.01	-.09	.14	.15	.14	-.02	.35	.24	.07	-.01	.06	.25	.38	.59	----		4.92	1.79
17. Institutional Tuition and Fees	-.04	.02	.00	.18	.16	.20	-.04	.23	.12	.04	-.05	.10	.20	.40	.32	.25	----	131.40	90.47

^a Sample n = 5211

^b Coding is as follows. Black: 1 = black, 0 = other. Hispanic: 1 = Mexican or Puerto Rican background reported as ethnicity, 0 = other. Female: 1 = Female, 0 = other. Father's Education, Mother's Education: 1 = grammar or less, 2 = some high school, 3 = high school graduate, 4 = postsecondary school other than college, 5 = some college, 6 = college degree, 7 = some graduate school, 8 = graduate degree. Parental Income: Recoded to interval midpoints, values equal to 1500, 3500, 5000, 7000, 9000, 11250, 13750, 17500, 22500, 27500, 32500, 37500, 45000, 60000. Dependent Siblings: 1 = none, 2 = 1, 3 = 2, 4 = 3, 5 = 4, 6 = 5 or more. Tested Ability: SAT verbal plus SAT math, all divided by 10 (ACT scores converted to SAT score equivalents). Academic Achievement: High School GPA, where 8 = A or A+, 7 = A-, 6 = B+, 5 = B, 4 = B-, 3 = C+, 2 = C, 1 = D. High School Student Government, High School Departmental or Pre-Professional Club, High School Journalism, Drama, Debate: 1 = yes, 0 = no. Educational Aspirations: 1 = none, 2 = AA, 3 = BA, 4 = MA or Divinity, 5 = Doctoral or professional degree. Institutional Selectivity: Mean SAT verbal plus mean SAT math for all students, all divided by 10 (ACT scores converted to SAT score equivalents). Institutional Prestige: an interactional variable indicator relating enrollment to selectivity on a 1 (low) to 9 (high) scale, see text and Table 1 for details. Institutional Per-Student Educational and General Expenditures: 1 = less than \$1000, 2 = \$1000 to \$1499, 3 = \$1500 to \$1999, 4 = \$2000 to \$2499, 5 = \$2500 to \$2999, 6 = \$3000 to \$3499, 7 = \$3500 to \$3999, 8 = \$4000 or more. Institutional Tuition and Fees: Undergraduate tuition and fees, divided by 10 and rounded.

Table 3

Regressions for Institutional Characteristics^a

	<u>Selectivity</u>	<u>Prestige</u>	<u>Per-Student Educational and General Expenditures</u>	<u>Tuition and Fees</u>
Black	-.09***	-.01	.18***	.04**
Hispanic	.02	.03*	.03*	.04**
Female	-.03*	-.04**	-.03	.06***
Father's Education	.06***	.05***	.02	.03*
Mother's Education	.04***	.04**	.05***	.05**
Parental Income	.11***	.11***	.09***	.14***
Dependent Siblings	-.03**	-.03**	-.04**	-.06***
Tested Ability	.38***	.37***	.30***	.18***
Academic Achievement	.10***	.11***	.09***	-.01
H.S. Student Govt.	.02	.02	.02	.00
H.S. Departmental or Pre-professional Club	-.04***	-.03*	-.01	-.05***
H.S. Journalism, Drama, Debate	.02	.02	.01	.07***
Educ. Aspirations	<u>.12***</u>	<u>.11***</u>	<u>.11***</u>	<u>.13***</u>
R ²	.37	.32	.19	.12
R ² for Educational Characteristics Alone (% of total R ²)	.33 (89%)	.29 (91%)	.15 (79%)	.08 (67%)

*** $p < .001$ ** $p < .01$ * $p < .05$

^aStandardized regression coefficients are presented. Sample n=5211. For variable indicator definitions, see Table 2, note b.